

CLAIMS

We claim:

1. A restraining arrangement for limiting the separation between a feed table having a pivot pin mounted thereto and a positioner block of a mobile track drill, the arrangement comprising:

5 a first constraint device secured to the positioner block; and
a second constraint device secured to the feed table and configured to receive and retain the first constraint device such that the first constraint device is rotatable relative to the second constraint device.

2. The restraining arrangement of claim 1 wherein the first constraint device includes a pair of extended ears and the second constraint device includes a recessed groove sized to receive the pair of extended ears.

3. The restraining arrangement of claim 2 wherein the first constraint device is stationarily mounted to the positioner block and the second constraint device is stationarily mounted to the feed table.

4. The restraining arrangement of claim 2 wherein the second constraint device includes a pair of female constraint members mounted to the feed table, each female constraint member defining a portion of the recessed groove.

5. The restraining arrangement of claim 4 wherein the pair of female constraint members are spaced from each other to define a pair of insertion gaps, wherein the recessed groove is discontinuous along the pair of insertion gaps.

6. The restraining arrangement of claim 5 wherein the length of each insertion gap is at least as long as the length of each of the extended ears

formed on the first constraint device such that the extended ears can pass through the pair of insertion gaps.

7. The restraining arrangement of claim 5 further comprising a pair of retainer caps mountable to the pair of female constraint members, wherein each retainer cap is configured to extend across one of the insertion gaps between the female constraint members.

8. The restraining arrangement of claim 7 wherein each retainer cap includes a recessed groove such that when the retainer caps are mounted to the female constraint members, the recessed groove of the second constraint device is continuous.

9. The restraining arrangement of claim 2 wherein the first constraint device is a bushing received in the positioner block, the bushing having a central opening sized to receive the pivot pin of the feed table.

10. The restraining arrangement of claim 9 wherein the bushing member includes an upper rim and a cylindrical body, the cylindrical body being sized to receive the pivot pin and the upper rim including the pair of extended ears.

11. The restraining arrangement of claim 10 wherein the bushing is formed from steel.

12. A restraining arrangement for limiting the separation of a feed table having a pivot pin mounted thereto and a positioner block of a track drill, the arrangement comprising:

5 a male constraint member secured to the positioner block, the male constraint member including a pair of extended ears; and

a pair of female constraint members mounted to the feed table, each female constraint member including a recessed groove sized to receive the extended ears formed on the male constraint member such that the male constraint member is rotatable relative to the female constraint member,

10 wherein the interaction between the pair of female constraint members and the male constraint member prevents movement of the feed table away from the positioner block.

13. The restraining arrangement of claim 12 wherein the pair of female restraint members are spaced from each other to define a pair of insertion gaps.

14. The restraining arrangement of claim 13 wherein each of the insertion gaps have a length at least as great as the length of the extended ears formed on the male constraint member such that the male constraint member can be inserted into the female constraint members.

15. The restraining arrangement of claim 14 wherein the recessed groove formed by the pair of female constraint members is circular and the insertion gaps are diametrically opposite each other.

16. The restraining arrangement of claim 14 further comprising a pair of retainer caps each mountable between the pair of female constraint members such that each of the retainer caps extend across one of the insertion gaps.

17. The restraining arrangement of claim 16 wherein each of the retainer caps includes a recessed groove such that when the retainer caps are mounted to the female constraint members, the recessed groove is continuous.

18. The restraining arrangement of claim 12 wherein the male constraint member is a bushing received within the positioner block, the bushing having an upper rim and a cylindrical body, the cylindrical body being sized to receive the pivot pin and the upper rim including the pair of extended ears.

19. A method of limiting the separation of a feed table having a pivot pin and a positioner block of a track drill, the method comprising the steps of:
 - mounting a male constraint member to the positioner block of the track drill, the male constraint member including at least a pair of extended ears;
 - mounting a pair of female constraint members to the feed table, each female constraint member including a recessed groove;
 - inserting the male constraint member into the female constraint member such that the extended ears of the male constraint member are received within the recessed grooves of the female constraint members; and
 - preventing the separation of the male constraint member from the female constraint member.

20. The method of claim 19 wherein the pair of female constraint members are separated from each other by an insertion gap, wherein each insertion gap has a length at least as great as the length of the pair of ears formed on the male constraint member such that the ears of the male constraint member can pass through the insertion gap.

21. The method of claim 20 further comprising the step of attaching a pair of retainer caps to the pair of female constraint members after the male constraint member is received within the pair of female constraint members, wherein the retainer caps prevent separation of the male constraint member from the female constraint members.

22. The method of claim 21 wherein each of the retainer caps includes a recessed groove sized to receive the extended ears formed on the male constraint member.

23. The method of claim 19 wherein the male constraint member is a bushing having an upper rim and a cylindrical body, the cylindrical body being sized to receive the pivot pin and the upper rim including the pair of extended ears.